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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/541,857 04/03/00 COLLIER

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021186 MM91/0606  
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EXAMINER

LAM, T

ART UNIT

PAPER NUMBER

2816

DATE MAILED:

06/06/01

Please find below and/or attached an Office communication concerning this application or proceeding.

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/541,857	COLLIER ET AL
<b>Examiner</b>	<b>Art Unit</b>	
Tuan T. Lam	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 03 April 2000.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-30 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-30 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

15) Notice of References Cited (PTO-892)

16) Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.

18) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

19) Notice of Informal Patent Application (PTO-152)

20) Other: \_\_\_\_\_

## **DETAILED ACTION**

### *Claim Objections*

1. Claims 3-13, 19, 23, 25 and 27-30 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and/or cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 3-13, 19, 23, 25 and 27-30 have not been further treated on the merits.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-30 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In this instant, the specification fails to teach as to how to make and use the recited modulation means as recited in claims 1 and 20. As presently recited, claims 1 and 20 appear to read on figure 3. However, figure 3 is not the actual circuit of the present invention. Figure 3 is an equivalent circuit of the actual circuit shown in figure 2. The specification discloses how to make and use the actual circuit but does not disclose as to how to make and use the equivalent circuit, i.e., the modulation means (33a and 33b) is not disclosed by the specification. Correction is required.

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3. Regarding claim 14, the specification fails to disclose as to how to make and use the varying means of the latch.

4. Claims 2-13, 15-19 and 21-30 are also rejected under 35USC 112, first paragraph because of the technical deficiencies of claims 1, 14 and 20.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 6, 12, 14-19, 23-24 and 28-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, the recitation of "said modulating means varies the strength of connection between adjacent amplifier stage" is indefinite because it is unclear as to how the strength of connection between adjacent amplifier stage is varied by the modulating means. Clarification is required.

Claim 12 is indefinite because it fails to recite the interconnection between the logic means and the amplifier stages.

In claim 14, the recitation of "said latch comprises varying means for varying the time taken for new data to be written into said memory arrangement" is indefinite because it is unclear as to which is the varying means of the latch. Applicant is required to particularly point out the varying means and the input means as recited in claim 14.

In claim 15, the recitation of "said varying means varies the strength connection between said input means and said memory arrangement" is indefinite because it is unclear as to how the

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strength of connection between said input means and said memory arrangement is varied by the modulating means. Applicant is required to particularly point out the above limitations.

In claim 16, the recitation of "said varying means varies the hysteresis of the memory arrangement" is indefinite because it is unclear as to the hysteresis of the memory arrangement is varied by the varying means. Applicant is required to particularly point out as to how the hysteresis of the memory arrangement is varied.

In claim 19, the recitation of "said varying means" lacks proper antecedent basis if depending on claim 13. Correction is required.

In claim 23, the recitation of "said modulating step varies the strength of connection between adjacent amplifier stage" is indefinite because it is unclear as to how the strength of connection between said adjacent amplifier stage is varied. Applicant is required to particularly point out the above limitations.

In claim 24, the recitation of "said modulating step varies the hysteresis of each of said amplifier stage" is indefinite because it is unclear as to how the hysteresis of the amplifier stage is varied by the modulating step. Applicant is required to particularly point out as to how the hysteresis of the amplifier stage is varied.

Claim 28 is indefinite because it is unclear as how the logic circuits provides ratios other than powers of two.

Claim 29 is indefinite because it a mixture of method and apparatus claim.

Claims 17-18 are indefinite because of the technical deficiencies of claim 14.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3 and 20-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al.(USP 4,356,411). Figure 5 shows a frequency divider comprising an even number amplifier stages (two) with an output of the last stage connected to the input of the first stage, modulating means (253-256) as called for in claims 1-3 and 20-26.

9. Regarding claims 25 and 26, Suzuki's latch is formed with CMOSFETs.

10. Claims 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al.(USP 4,356,411). Figure 5 shows a frequency divider comprising a data input (input of transistors 253 and 255), a data output (Q and Q/), a clock input (CLOCK), two inverters connected in a memory arrangement (243, 244, 248, 249), input means (254 and 256) responsive to the clock input, varying means (253, 255) as called for in claim 14.

11. Regarding claims 15 and 16, the recited limitations are seen to be inherently present in Suzuki's figure 5.

12. Regarding claims 17 and 18, Suzuki's latch is formed with CMOSFETs.

***Conclusion***

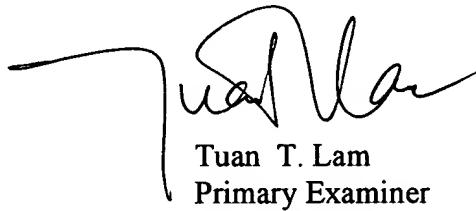
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In this regard, applicant cited prior art has been carefully considered.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 703-305-3791. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Tuan T. Lam  
Primary Examiner  
Art Unit 2816

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May 24, 2001